



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,621	04/07/2005	Marc Bohn	2002P15650WOUS	6976

7590 10/17/2007
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

SINGH, DALZID E

ART UNIT	PAPER NUMBER
----------	--------------

2613

MAIL DATE	DELIVERY MODE
-----------	---------------

10/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/530,621

Applicant(s)

BOHN ET AL.

Examiner

Dalzid Singh

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40, 41, 43, 45-52, 54, 55, 57, 58, 62 and 63 is/are rejected.
- 7) ☒ Claim(s) 42, 44, 53, 56, 59-61, 64 and 65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 45, 55 and 57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 45 recites, "wherein one or more quality parameters are measured for a statement about noise-like interference..." It is not clear what defines noise-like interference.

Claim 55 recites, "wherein the main effects or groups of effects anticipated as having an influence on the signal are dispersion, distortions, noise-like effects..." It is not clear what defines noise-like effects.

Claim 57 recites, "...it is possible to set predefined pass characteristics for the adaptive optical filter, to exercise an influence on signal distortions in the optical signal." The word "possible" is not a positive recitation to suggest that the filter is performing such function. Therefore it is unclear if the claim is able to perform the second operating state.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 40, 41, 43, 45, 46, 48-52, 54, 55, 57, 58, 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al (US Pub. No. 2002/0141010).

Regarding claim 40, Rodgers et al disclose a method for determining signal degradations for an optical signal transmitted in a transmission system, the method, as shown in Fig. 6 comprising:

feeding at least a fraction of the optical signal to an adaptive optical filter at a measurement point in the transmission system (the signal is tapped 10%); and measuring the fraction related to one or more quality parameters (see paragraphs [0029-0035]).

Rodgers et al disclose control of the filter and differ from the claimed invention in that Rodgers et al do not specifically disclose, wherein a first measurement of the quality parameter is made with the adaptive optical filter being set to pass all signals or being by-passed, and wherein further measurements are made related to the quality parameter with the adaptive optical filter having predefined pass characteristics, each influencing specific signal distortions. However, since the filter device of Rodgers et al

is tunable or controllable, therefore it would have been obvious to adjust the filter such to pass all signals or to control the filter to pass predefined pass characteristics in order to measure desired optical performance.

Regarding claim 41, Rodgers et al wherein the pass characteristics of the adaptive optical filter by which one or more signal distortions are influenced or compensated, as applicable, are reset before, between or after the measurements which are made.

Regarding claim 43, Rodgers et al disclose wherein at least one quality parameter is measured for a statement about the residual dispersion and about other signal distortions in the filtered signal, and from this compensation is effected by an adjustment of the adaptive optical filter.

Regarding claim 45, Rodgers et al disclose wherein one or more quality parameters are measured for a statement about noise-like interference in the filtered signal.

Regarding claim 46, Rodger et al disclose wherein one or more quality parameters provide statements about polarization effects.

Regarding claim 48, Rodgers et al disclose wherein the pass characteristics of the adaptive optical filter are regulated on the basis of an analysis of one or more of the quality parameters which have been determined.

Regarding claim 49, Rodgers et al do not disclose that the pass characteristics of the adaptive optical filter are determined from computer simulations, however, since

the filter is controllable therefore it would have been obvious to provide the pass characteristics from computer simulation.

Regarding claim 50, Rodgers et al disclose wherein by using a predefined variation in the pass characteristics of the adaptive optical filter, an analysis is carried out of the signal quality, in relation to various effects which can influence the signal.

Regarding claim 51, Rodgers et al disclose wherein by using a predefined variation in the pass characteristics of the adaptive optical filter, the various effects which can influence the signal are separated out (the filter is controlled to provide predefined variation).

Regarding claim 52, Rodgers et al disclose wherein the signal is optimized in relation to one or more quality parameters by means of suitable adjustment parameters of the adaptive optical filter, and from these adjustment parameters conclusions are drawn about the signal degradations (it is inherent that adjustment are made in response to degradation).

Regarding claim 53, wherein a table, for use in registering the effects which can influence the signal against the corresponding settings of the pass characteristics of the adaptive optical filter, is created when the pass characteristics are reset.

Regarding claim 54, Rodgers et al do not specifically disclose wherein when a change is detected in the signal quality, a corresponding table is updated. However, it would have been obvious to provide table corresponding to change in signal quality in order to provide real-time changes.

Regarding claim 55, Rodgers et al disclose wherein the main effects or groups of effects anticipated as having an influence on the signal are dispersion, distortions, noise-like effects and polarization effects.

Regarding claim 57, Rodgers et al disclose an arrangement for determining signal degradations in an optical broadband signal transmitted via a transmission system, as shown in Fig. 6, the arrangement comprising:

a coupler (62) and an adaptive optical filter (63), wherein at least a spectral and/or amplitude fraction is tapped off from the signal by the coupler and fed to the adaptive optical filter; and a measurement unit (67 and 68) and a determination unit for determining one or more quality parameters (the determination unit is part of the measurement unit) (see paragraphs [0029-0035]).

Rodgers et al disclose control of the filter and differ from the claimed invention in that Rodgers et al do not specifically disclose, wherein the adaptive optical filter has a control unit is configured such that in a first operating state the through-switching of the optical signal is effected and in a second operating state it is possible to set predefined pass characteristics for the adaptive optical filter, to exercise an influence on signal distortions in the optical signal. However, since the filter device of Rodgers et al is tunable or controllable, therefore it would have been obvious to adjust the filter such to pass all signals or to control the filter to pass predefined pass characteristics in order to measure desired optical performance.

Regarding claim 58, wherein a bandpass filter (69) is connected downstream from the coupler (62).

Regarding claim 62, Rodger et al wherein a module for analyzing and separating signal degradations is connected to the determination unit (it is inherent that there exist module for analyzing and separating signal degradations).

Regarding claim 63, Rodger et al disclose wherein an opto-electrical converter (65) is arranged upstream of the measurement unit.

5. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rodgers et al (US Pub. No. 2002/0141010) in view of Besslos (US Patent No. 7,110,683).

Regarding claim 47, Rodgers et al disclose adaptive filter and differ from the claimed invention in that Rodgers et al do not disclose the adaptive optical filter, use is made of a single- or multi-stage FIR or an IIR filter for which the amplitude or phase response of the optical signal can be regulated. Besslos teaches the use of FIR filter (see col. 4, lines 24-39). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to replace the filter of Rodgers et al with that of a FIR filter as taught by Besslos in order to provide greater response.

Allowable Subject Matter

6. Claims 42, 44, 53, 56, 59, 60, 61, 64 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lange et al (US Patent No. 6,748,179) is cited to show WDM channel monitoring system and method.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 11, 2007

DALZID SINGH
PRIMARY EXAMINER

Dalrid Singh